The state of California has a similar comprehensive monitoring program underway, pursuant to Assembly Bill 1803 of 1983. The first phase of the program, which is to be completed in 1986, will cover "large" water systems, defined as containing more than 200 connections. So far, the data show that about 12 percent of the more than 2500 sampled wells have detectable concentrations of organic chemicals found on the priority pollutant list, plus a supplemental list prepared by the state of California. About 4.5 percent of the wells had pollutant concentrations exceeding a state "action level" or federal maximum contaminant level. Generally, the most frequently found chemicals were the volatile organics, typically industrial solvents. The large volume of data generated will help state and local governments make land use decisions, formulate control regulations, and develop aquifer classifications.

The California monitoring program has also identified some difficulties to be overcome, as the program is extended to cover small water systems. First, quality control in participating laboratories has required a great effort. Compliance with analytical protocols specified by the California Department of Health Services (DOHS) was difficult to obtain, and a number of analyses had to be repeated in the interest of quality control. Second, data management, and especially quality control of entry and retrieval, has been identified as a topic of special concern to the program.

While many states use total dissolved solids (TDS) concentration as the principal criteria to define drinking water aquifers, few have incorporated actual water quality data into state ground water management plans. As with hydrogeologic information, local programs have made more use of water quality data to delineate ground water management zones.

New Jersey has used actual ambient water quality in a regulatory program. An extensive data gathering effort was conducted to characterize the ambient quality that supports the unique ecosystem (the Pine Barrens) in this area. The resultant values for pH, nitrate, nitrogen, and phosphorus were incorporated into the state classification system.

Presumed water quality is used to define class GB waters (not suitable for potable use without treatment) in the state of Connecticut. In this case, land use patterns and the presence of known discharges in an area were used as evidence of probable degradation of the ground water to a point where its use for drinking water supply would require treatment.

Both Nassau and Suffolk counties, Long Island, have their own monitoring networks, as well as assistance from the USGS in that area. Through this extensive water quality data base, ground water quality has been mapped in three dimensions based on nitrate and organic pollutant concentrations. This information was used to subdivide the hydrogeologic flow regions into